

REMARKS

Entry of this amendment is respectfully requested.

Withdrawn claims 97-106 have been canceled.

Claims 41-96 were rejected under 35 U.S.C. §112, first paragraph, for allegedly not being enabled by the specification. Applicants respectfully traverse.

The phrase “the monomers, oligomers and/or polymers are selected such tat a narrow distribution of medium-sized chain lengths results when the components are crosslinked” in present claims 41 and 42, based on the specification, is easily understood to refer to a combination of at least two of monomers, oligomers and polymers – as there is such freedom to select those components. There may be monofunctional, difunctional and trifunctional monomers or respective oligomers. “mono-, di- or/and tri-functional monomers or/and oligomers” as is disclosed on page 19, line 15.

It is believed that the amendments to the claims overcome all of the 35 U.S.C. §112, second paragraph rejections.

Claims 41-57, 59-84, 87-96 and 107 were rejected under 35 U.S.C. §103(a) over Gros. Applicants respectfully traverse.

Gros concerns radically curable compositions with certain types of electroconductive particles. Examples 1 to 3, 5 and 6 show a content of aliphatic urethane acrylate, but the selection of reactive diluents (“polymerizable compounds”) does not provide any hint or suggestion to select isobornylacrylate, isobornylmethacrylate, but to other acrylates/diacrylates/triacrylates as mentioned in the examples of the present application.

The base polymer is called a “binder” which is disclosed in pars. [0016] and [0023]. In the examples, novolak epoxy resin, acrylic ester of an aromatic epoxy resin and perhaps aliphatic urethane acrylate are mentioned as base polymer.

In view of the foregoing, this rejection must be withdrawn.

Claims 58-59 were rejected over the combination of Gros and Dichter. Applicants respectfully traverse.

The deficiencies of Gros are described above.

Dichter discloses the corrosion protection of steel pipes with compositions on the base of a) hydroxyethyl or hydroxypropyl methacrylates as well as similar acrylates, b) epoxy resins based on bisphenol A and epichlorohydrin, phenol or cresol based polyfunctional epoxy novolac resins, water reducible epoxy esters and urethane prepolymers as well as other prepolymers, c) silver, iron, copper and cobalt salts as graft initiators, d) peroxide or persulfate as catalyst and e) water (Claim 1).

The amount of monomers may be 3 to 10 % of the composition, the amount of [acrylic] prepolymers may be 30 to 50 % of the composition (Claim 2).

This composition has to contain a considerable content of water. The examples show water contents of about 20 % and often relatively high amounts of acrylic prepolymer emulsion or styrene acrylic emulsion.

However, there is no indication that these compositions could be radically polymerized. The coatings seem to be dried on, whereby the polymerization might have taken place.

It does not specifically disclose to add urethane acrylate polyester or isobornylacrylate or isobornylmethacrylate. Thus, this rejection must be withdrawn.

Claims 41-57, 59-84, 87-96 and 107 were rejected under 35 U.S.C. §103(a) over Shustack. Applicants respectfully traverse.

Shustack describes radiation-curable coating compositions for application on metal surfaces, which coating shall be metal worked together with the substrate afterwards, but it often refers more to an ink than to a type of a primer coating.

The compositions contain:

a) 15 to 75 % of ethylenically unsaturated bulky monomers on the base of acrylic acid and methacrylic acid (note general formula therefor, including isobornyl (meth)acrylates too! note col. 16, l. 50), b) 10 to 80 % of (i) urethane (meth)acrylate as well as (ii) epoxy (meth)acrylate, c) ≤ 10 % of an acidic adhesion promoter (Claim 1, 4th par. of col. 4: e.g. phosphate ester), as well as a photoinitiator (Claim 4).

Further additives are mentioned in the paragraph bridging pars. 3 and 4.

Such compositions are intended for use in metal can production (top of col. 1).

Can production, however, requires certain properties for inks and coatings that are not intended for other metal coating or metal working applications – as may be seen by a cooking test where the coated article does not form brownish or darker colored coatings which is indicated by the need of a pasteurizing treatment at temperatures from 40 to 100 °C (col. 2, l. 23/24, 4th par. of col. 3).

Therefore, the metal substrates are not made primarily of zinc coated steel (col. 2, l. 65/66), but primarily made of aluminum alloys for beverage cans. Such coatings are applied on cups that are already formed, (2nd and 3rd par. of col. 3), but not on strips/coils or metal sheets.

Shustack mentions polyester acrylates, but not polyester urethane acrylates (3rd to 5th par. of col. 8). Shustack does not disclose the use of any corrosion resistant agents such as organic or inorganic corrosion inhibitors or corrosion resistant silicate pigments.

It does not specifically disclose to add urethane acrylate polyester.

Therefore, this rejection must be withdrawn.

Claims 41-66, 69-92, 95-96 and 107 were rejected under 35 U.S.C. §103(a) over Stevenson. Applicants respectfully traverse.

Stevenson protects curable coating compositions comprising a coating solids component which includes:

A) at least 30 %w of quaternized reaction product from epoxy resin and acid/tertiary amine including ammonium salts,

B) at least 5 %w of reactive diluent (Claim 1; cols. 7/8, e.g. polyester acrylates) and optionally curing agent.

The compositions of this reference may be free of organic solvents, as the reactive diluents work as such solvents, but are then able to chemically react to form binder phase.

There may be up to 30 %w of organic solvent and up to 60-70 %w of water nevertheless (bottom of col. 4). In col. 10, l. 36 and 40 flat sheet and coil are mentioned, but not any corrosion resistant agents like organic or inorganic corrosion inhibitors or corrosion resistant silicate pigments.

Stevenson does not specifically disclose to add urethane acrylate polyester or isobornylacrylate or isobornylmethacrylate.

All these cited publications mentioned above do disclose the different compositions and sometimes chemical reactions for the production of a binder, but nowhere is data provided for

corrosion resistance and paint adherence. Therefore, a comparison by coating properties is impossible.

The present application discloses a combination of binder generating substances from urethane acrylates with reactive diluents like isobornylacrylate and isobornylmethacrylate.

None of the cited references discloses the coating of metallic strips at the claimed velocity. Thus, all rejections should be withdrawn.

Allowance is respectfully requested.

Entry of this amendment is respectfully requested. If any fee are due, authorization is given to charge deposit account no: 50-0624.

Respectfully submitted,

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